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XIX.—*On a Discovery of Flint Arrowheads and other Stone Implements at Little Salisbury Hill, near Bath.* By JOHN EVANS, Esq., F.R.S., F.S.A.

[Read Dec. 27th, 1864.]

ON the occasion of the late meeting of the British Association at Bath, my attention was called to a paragraph in the "list of objects of interest in and around Bath" published in the *Bath Chronicle*. It ran as follows: "Little Solsbury Hill over Batheaston. Ancient earthworks not assignable to any precise date. Camden supposes the Saxons to have besieged Bath from this hill; numbers of flint arrows have been found here." I may observe, by the way, that this reference to Camden is not strictly correct, though the additions to the *Britannia* in Gough's edition, vol. i, p. 120, ed. 1806, contain the following passage derived from Collinson's *History of Somerset*, vol. i, p. 99. "On the north-west side of the village (Batheaston) rises Salisbury Hill, near 600 feet from the river, with an entrenchment of an almost circular shape, supposed to have been thrown up by the Saxons when they besieged Bath A.D. 577." Regardless, however, of the authority on which the camp on Salisbury Hill was considered to be Saxon, Mr. Lubbock, Mr. Galton and I were induced by the combined attractions of earthworks and flint arrows to pay it a visit.

We found it to be an isolated hill of Inferior Oolite and the Fuller's earth beds, capped with the great or Bath Oolite, which formed a horizontal plateau, some few acres in extent at the top, from whence a magnificent view over the city of Bath, the valley of the Avon and the surrounding country was obtained. The vallum which at one time would appear to have surrounded the plateau has in great part disappeared, and but slight traces of it remain. Immediately, however, on our arrival at the summit of the hill, we caught sight of a seam of black mould at the top of the cliff of a small quarry which had been worked in the side of the hill, and containing numerous mammalian bones and teeth, among which we recognised those of horse, ox and pig. There were also several pieces of rude pottery, some of them of ordinary red clay-ware, and others of more imperfectly burnt clay, containing numerous particles of calcareous matter—probably pounded shells, either recent or fossil—and similar in character to the ware of which was formed the urn found a few years ago at Nunney near Frome, containing ancient British coins of the first century of our era.

The plateau at the top of the hill appears to have been under cultivation for many years, and as some parts of it were fallow, we commenced a search for arrowheads or other objects in flint, which, as the natural soil contains no stones except Oolitic débris, would be sure to be readily found if present. Our search was rewarded by our finding a very large number of flint chippings and flakes of various sizes and different degrees of perfection, but mostly small and rude. We also found several cores or nuclei, and several short "thumb flints" or "scrapers," chipped at one end into a semicircular form, and one of them presenting an almost circular outline, about an inch and a quarter in diameter. Another flake worked to a rounded point at each end seems to have been used as a borer or "rimer." Another has a ground or polished surface on one side, showing that it has been chipped from off a polished celt. We also found the broken end of a polished flint celt about three quarters of an inch wide, with the edge rounded off and purposely made blunt. Of arrowheads in flint we found seven or eight specimens, two or three of them perfect, the others in a more or less broken condition. None of them appear to have been barbed, but they are all of the leaf-shape, though some of them are much more elongated than others. Some are chipped to an equally convex shape on each face, others are worked upon one of the faces only.

Besides the worked flints we found several other implements of stone which are worthy of being noticed. Of these, the most remarkable is a rounded pebble of hæmatitic iron ore, which was found by Mr. Lubbock, and which has several deep scorings upon it, as if it had been used for smoothing over a roughly chipped edge rather than for sharpening it. Similar scorings might however have been perhaps produced by grinding weapons whether of stone or metal to a point. At a late meeting of the Archaeological Institute, the Hon. W. O. Stanley gave an account of a remarkable block of stone in one of the mountain passes of Caernarvonshire, which is known as the "Carreg-y-Saelhan," or "the stone of the arrows." It is a flat stone, nearly circular in form and about six feet over, with a number of straight scorings upon it from a quarter to half-an-inch deep; and these, according to tradition, were produced by the arrows and other weapons of the chieftains, who, on the commencement of war, were accustomed to sharpen them upon this rock. There is much probability of there being some truth in this tradition, and if so, the stone from Salisbury Hill, though so much smaller in size, may have been used for an analogous purpose. We also found a piece of green stone, which, as part of its surface appears to have been ground, may originally have formed part of a stone celt. The last purpose, however, to which it has been applied, is that of

a hammer, as both ends are considerably battered. A pebble of altered schist, which has split up through use, has also been employed in the same manner. Besides these, we found two stone implements of quartzite, presenting a rather singular character. They appear to have been formed originally from rounded pebbles which have been broken in the direction of their longest diameter into rudely-shaped quadrangular prisms with one end flattened and the other left with the original contour of the pebble. This rounded end of the prism has been subsequently worn or ground away in such a manner that a ridge, or very blunt edge, is left along its centre, and running nearly parallel to two sides of the prism. From the similarity of the two specimens, it is evident that there was some design in their being thus formed, but the purpose for which they were intended it is difficult to conjecture. They may *possibly* have been used in the manufacture of flint arrowheads and weapons, or even as corn-crushers.

The only other objects of interest which were found were a few small quartz pebbles, some of them broken, concerning which I am tempted to say a few words. In making flint flakes at the present day, for the purpose of the manufacture of gun-flints, the flint-knapper employs a hammer with a comparatively sharp, though rounded, point, so as to concentrate his blow upon a single spot, which forms the apex of the cone of percussion, the extension of which, through the block of flint, causes the separation of the flake from the matrix. But it has always been a question in my mind how, with no other resource than a rounded pebble for a hammer, flakes of moderate size could be struck off from a block of flint with any approach to certainty in their form. Theoretically, the impact of a spheroidal stone on a flat surface of flint, would be confined to a single point; but practically, a blow from a stone of sufficient weight to fracture the flint would be spread over a considerable surface, and flakes struck off by such means usually show a large and considerably truncated cone of percussion. There is moreover very great difficulty in directing the successive blows which are requisite for the formation of a single flake to the right spots. It had occurred to me, that in ancient times it was possible that some small and hard pebble had been applied as a "set" or punch to the proper place on the surface of the flint, and then have been struck with a stone or wooden hammer. By this means the blow could always be directed to the right spot, and the force of the impact concentrated in a small space. I have lately made trial of this process, and though not very successful, I find that by using a small quartz pebble as a set, the difficulty of producing flint flakes with only a stone or wooden hammer is materially

lessened. Of course the quartz pebbles get broken from time to time, and the ends get shattered, but this is precisely the appearance presented by some of those from Little Salisbury Hill. Whether they were originally used for such a purpose as that I have now suggested I will not attempt to determine, but the method I have described of making flint flakes is certainly one which *may* have been followed.

Neither will I attempt to assign any definite age for the objects we discovered, though we should probably be justified in referring them to the pre-Roman period, and may certainly claim for the first occupation of Little Salisbury Hill a date far earlier than those Saxon times to which Collinson has ascribed the encampment.